

CLAIMs

What is claimed is:

- 1 A method for writing data on a data storage device, comprising:
 - said data storage device receiving a write command;
 - obtaining a starting LBA and a LBA transfer length from said write command;
 - using said starting LBA and said LBA transfer length to determine one or more destination LBAs for writing data to;
 - obtaining a LBA WORM utilization bit from a WORM memory for each of said one or more destination LBAs; and
 - in response to said LBA WORM utilization bit indicating a rewriteable LBA for each of said one or more destination LBAs, executing said write command to write data to said one or more destination LBAs.
- 2 The method of claim 1, further comprising:
 - in response to said LBA WORM utilization bit indicating a WORM LBA for any of said one or more destination LBAs, not executing said write command.
- 3 The method of claim 1, further comprising:
 - obtaining a WORM bit from said write command; and
 - in response to determining that said write command executed without errors and that said WORM bit indicates WORM data, setting said LBA WORM utilization bit for said one or more destination LBAs in said WORM memory to indicate WORM data.
- 4 The method of claim 1, further comprising:
 - in response to determining that said write command executed with at least one error, rewriting said data.
- 5 The method of claim 1, further comprising:
 - in response to determining that said write command executed with at least one error, rewriting the data beginning at said starting LBA.

- 6 The method of claim 1, further comprising:
 - in response to determining that said write command executed with at least one error, rewriting said data beginning at a LBA that is greater than said starting LBA.
- 7 The method of claim 1, wherein said write command writes said data as WORM data on said data storage device.
- 8 A data storage device, comprising:
 - a data storage media for storage of data;
 - a processor for controlling said data storage device;
 - a WORM memory coupled to said processor for storage of a LBA WORM utilization bit; and
 - a host device interface coupled to said processor for receiving commands from a host computer.
- 9 The data storage device of claim 8, wherein said data is stored as WORM data on said data storage media.
- 10 The data storage device of claim 8, wherein said processor obtains a starting LBA and a LBA transfer length from a write command received by said host device interface, uses said starting LBA and said LBA transfer length to determine one or more destination LBAs for writing data to, obtains a LBA WORM utilization bit from a WORM memory for each of said one or more destination LBAs and in response to said LBA WORM utilization bit indicating a rewriteable LBA for each of said one or more destination LBAs, executes said write command to write data to said one or more destination LBAs.
- 11 The data storage device of claim 8, wherein said WORM memory is an EPROM.
- 12 The data storage device of claim 8, wherein said WORM memory is a PROM.
- 13 The data storage device of claim 8, wherein said WORM memory is a FLASH memory.
- 14 The data storage device claim 8, wherein said WORM memory is located inside a sealed portion of said data storage device.

- 15 The data storage device claim 8, wherein said WORM memory, further comprises:
- a memory device for storage of a date stamp associated with each said LBA WORM utilization bit.
- 16 An article of manufacture comprising a data storage medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform method steps for writing data on a data storage device, said steps comprising:
- said data storage device receiving a write command;
 - obtaining a starting LBA and a LBA transfer length from said write command;
 - using said starting LBA and said LBA transfer length to determine one or more destination LBAs for writing data to;
 - obtaining a LBA WORM utilization bit from a WORM memory for each of said one or more destination LBAs; and
 - in response to said LBA WORM utilization bit indicating a rewriteable LBA for each of said one or more destination LBAs, executing said write command to write data to said one or more destination LBAs.
- 17 The article of manufacture of claim 16, wherein said method steps further comprises:
- in response to said LBA WORM utilization bit indicating a WORM LBA for any of said one or more destination LBAs, not executing said write command.
- 18 The article of manufacture of claim 16, wherein said method steps further comprises:
- obtaining a first WORM bit from said write command; and
 - in response to determining that said write command executed without errors and that said first WORM bit indicates WORM data, setting said LBA WORM utilization bit for said one or more destination LBAs in said WORM memory to indicate WORM data.